

REMARKS

The Amendments

Per the request in the Office Action, the specification has been reviewed and some obvious typographical errors are corrected.

Claim 1 is amended to incorporate the substance of claim 5 therein. Claim 1 is also amended to clarify the relationship amongst the plate retarder components, i.e., that they are in "stacked films or layers." This relationship is believed to have been evident in the disclosure. As the disclosure makes clear, they need not be stacked in any particular order and there may be intervening layers or films. Also, they may be stacked, mounted on top of each other or be connected, e.g., by means of adhesive layers. Further, it is clear that a layer or film is intended to encompass multi-layer structures. See, e.g., page 8, lines 29-31, of the specification. This latter amendment does not narrow the scope of the claims since this relationship amongst the components was inherent in the description. The newly added claims are clearly supported by the disclosure, see, e.g., pages 9-11.

To the extent that the amendments avoid the prior art or for other reasons related to patentability, competitors are warned that the amendments are not intended to and do not limit the scope of equivalents which may be asserted on subject matter outside the literal scope of any patented claims but not anticipated or rendered obvious by the prior art or otherwise unpatentable to applicants. Applicants reserve the right to file one or more continuing and/or divisional applications directed to any subject matter disclosed in the application which has been canceled by any of the above amendments.

The Claim Objection

The objection to claim 16 is rendered moot by the amendment above.

The Rejection under 35 U.S.C. § 112, second paragraph

The rejection of claim 1 under 35 U.S.C. § 112, second paragraph, is believed to be overcome by the above amendment. The claim now recites the relationship of the recited plate retarders, as discussed above. This is clearly supported throughout the specification, see, e.g., page 23, lines 1-6, the drawing figures 2 and 3, and their description in the disclosure. Further, as evidenced, for example, by the cited Koch reference, the relationship of O, A and C plates in optical compensators would have been well known to one of ordinary skill in the art.

The Rejections under 35 U.S.C. § 103

The rejections of the claims under 35 U.S.C. § 103, as being obvious over Koch (U.S. Patent No. 5,619,352) in view of Chung (U.S. Patent No. 5,995,184) or further in view of Skarohlid (U.S. Patent No. 6,266,114) are respectfully traversed.

Koch is directed to optical compensators for liquid crystal displays which have an O-plate compensator which is of a polymerized thin film of liquid crystal material which duplicates the performance of a biaxial inorganic O-plate compensator; see, e.g., col. 10, lines 51-59. The compensators may also be used in connection with C-plate and A-plate compensators; see, e.g., col. 12, line 60, to col. 13, line 4.

Koch discloses no specifics regarding the A-plate compensator and does not disclose that the A-plate compensator has a low tilt, particularly an average tilt angle, θ_{ave} , of from 1 to 10°. In fact, Koch discloses that the selection of the A plate is not critical; see, e.g., col. 9, lines 31-36. Thus, there is no suggestion to one of ordinary skill in the art from Koch of an optical compensator with an A plate having an average tilt angle, θ_{ave} , of from 1 to 10°.

Chung discloses A plate compensators prepared from a liquid crystal polymer thin film. The Office Action states that Chung discloses a low tilt (0 - 25°) A plate. However, this is not an accurate reading of Chung. Chung does not disclose that the average tilt angle, θ_{ave} , of the A-plate is from 1 to 10°. The 0 - 25° tilt angle referred to at col. 4, lines 40-42, is the "tilt angle at the air interface." As discussed in Chung, the tilt varies through the thickness of the A-plate polymer film layer; see, e.g., col. 4, lines 59-63. See also page 5, lines 9-15, of applicants' disclosure providing the formula for calculating the average tilt angle, θ_{ave} , and page 9, lines 20-27, making clear the variation through the thickness. Therefrom, it is evident that the average tilt angle differs from Chung's tilt angle at the air interface.

Accordingly, Chung does not disclose or suggest an A-plate optical compensator having an average tilt angle, θ_{ave} , of from 1 to 10°. Accordingly, even assuming it would be obvious to make such a combination, the combination of using an A-plate compensator according to Chung in the optical compensator stacks of Koch does not result in or suggest the claimed invention.

Skarohlid was cited in the further rejection of claims 8 and 9 for its teaching regarding optical retardation values of O-plate and A-plate compensators. Even if such teachings of Skarohlid are applied to Koch and/or Chung, the combination of Koch and Chung fails to disclose or suggest the underlying claimed invention including an optical compensator with an A-plate having an average tilt angle, θ_{ave} , of from 1 to 10°. Thus, the combination of these teachings from Skarohlid fail to make up for the above-noted deficiencies of the primary references.

For the above reasons, it is urged that the combined teachings of the references fails to teach or suggest applicants' invention to one of ordinary skill in the art. Thus, the rejections under 35 U.S.C. § 103 should be withdrawn.

It is submitted that the claims are in condition for allowance. However, the Examiner is kindly invited to contact the undersigned to discuss any unresolved matters.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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